Table 1: THE HYPERVOLUME PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 100,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 10 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set		GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	RVSS-AD
Linear Triangular	3	1.52E+0(3)	1.52E+0(4)	-(9.5)	-(9.5)	1.51E+0(5)	1.51E+0(6)	1.43E+0(8)	1.43E+0(7)	**1.52E+0(1)**	1.52E+0(2)
	5	**2.46E+0(1)**	2.45E+0(2)	-(9.5)	-(9.5)	2.45E+0(3)	2.42E+0(6)	2.10E+0(8)	2.12E+0(7)	2.45E+0(5)	2.45E+0(4)
	8	-(9)	**4.29E+0(1)**	-(9)	-(9)	4.28E+0(2)	4.21E+0(5)	3.56E+0(6)	3.53E+0(7)	4.27E+0(4)	4.28E+0(3)
	10	-(9)	**6.19E+0(1)**	-(9)	-(9)	6.18E+0(2)	6.11E+0(5)	5.55E+0(6)	5.47E+0(7)	6.17E+0(4)	6.17E+0(3)
Linear Invertedtriangular	3	**5.31E-1(1)**	5.29E-1(2)	-(9.5)	-(9.5)	5.25E-1(3)	5.22E-1(4)	5.11E-1(6)	5.11E-1(5)	5.03E-1(7)	5.03E-1(8)
	5	**9.10E-2(1)**	9.05E-2(2)	-(9.5)	-(9.5)	8.97E-2(3)	8.49E-2(4)	7.99E-2(6)	8.02E-2(5)	7.78E-2(7)	6.96E-2(8)
	8	**1.92E-3(1)**	1.87E-3(3)	-(9.5)	-(9.5)	1.88E-3(2)	1.82E-3(4)	1.58E-3(6)	1.59E-3(5)	1.06E-3(8)	1.21E-3(7)
	10	-(9)	1.46E-4(2)	-(9)	-(9)	**1.48E-4(1)**	1.38E-4(3)	1.16E-4(4)	1.16E-4(5)	7.27E-5(7)	8.95E-5(6)
Concave Triangular	3	**1.15E+0(1)**	1.15E+0(2)	-(9.5)	-(9.5)	1.14E+0(3)	1.12E+0(6)	1.04E+0(8)	1.04E+0(7)	1.14E+0(4.5)	1.14E+0(4.5)
	5	**2.20E+0(1)**	2.18E+0(2)	-(9.5)	-(9.5)	2.15E+0(5)	2.02E+0(6)	1.58E+0(7)	1.58E+0(8)	2.17E+0(3.5)	2.17E+0(3.5)
	8	**4.09E+0(1)**	4.07E+0(2)	-(9.5)	-(9.5)	4.00E+0(5)	3.40E+0(6)	2.07E+0(7)	2.02E+0(8)	4.03E+0(3.5)	4.03E+0(3.5)
	10	-(9)	**6.01E+0(1)**	-(9)	-(9)	5.93E+0(4)	4.97E+0(5)	3.22E+0(6)	2.92E+0(7)	5.94E+0(2.5)	5.94E+0(2.5)
Concave Invertedtriangular	3	**2.26E-1(1)**	2.24E-1(2)	-(9.5)	-(9.5)	2.20E-1(3)	2.10E-1(6)	1.94E-1(8)	1.95E-1(7)	2.12E-1(5)	2.15E-1(4)
	5	**2.02E-2(1)**	1.99E-2(2)	-(9.5)	-(9.5)	1.86E-2(3)	1.39E-2(4)	1.20E-2(6)	1.22E-2(5)	9.27E-3(7)	9.26E-3(8)
	8	**2.34E-4(1)**	2.29E-4(2)	-(9.5)	-(9.5)	2.17E-4(3)	1.10E-4(5)	9.22E-5(7)	9.41E-5(6)	8.33E-5(8)	1.12E-4(4)
	10	-(9)	**1.09E-5(1)**	-(9)	-(9)	1.02E-5(2)	4.53E-6(5)	5.17E-6(4)	5.96E-6(3)	2.82E-6(7)	3.17E-6(6)
Convex Triangular	3	**1.71E+0(1)**	1.71E+0(4)	-(9.5)	-(9.5)	1.71E+0(3)	1.71E+0(2)	1.71E+0(8)	1.71E+0(7)	1.71E+0(5)	1.71E+0(6)
	5	**2.49E+0(1)**	2.49E+0(6)	-(9.5)	-(9.5)	2.49E+0(2)	2.49E+0(3)	2.49E+0(7)	2.49E+0(8)	2.49E+0(5)	2.49E+0(4)
	8	-(9)	4.30E+0(5)	-(9)	-(9)	**4.30E+0(1)**	4.30E+0(3)	4.30E+0(6)	4.30E+0(7)	4.30E+0(4)	4.30E+0(2)
	10	-(9)	6.19E+0(5)	-(9)	-(9)	**6.19E+0(1)**	6.19E+0(4)	6.19E+0(7)	6.19E+0(6)	6.19E+0(3)	6.19E+0(2)
Convex Invertedtriangular	3	**1.04E+0(1)**	1.04E+0(4)	-(9.5)	-(9.5)	1.04E+0(6)	1.04E+0(5)	1.04E+0(2)	1.04E+0(3)	1.01E+0(8)	1.01E+0(7)
	5	**5.01E-1(1)**	4.91E-1(2)	-(9.5)	-(9.5)	4.63E-1(6)	4.72E-1(5)	4.88E-1(4)	4.89E-1(3)	3.71E-1(7)	3.71E-1(8)
	8	**6.43E-2(1)**	6.14E-2(2)	-(9.5)	-(9.5)	3.79E-2(6)	4.45E-2(5)	5.60E-2(4)	5.74E-2(3)	3.49E-2(7)	3.33E-2(8)
	10	**1.47E-2(1)**	1.41E-2(2)	-(9.5)	-(9.5)	6.95E-3(8)	9.10E-3(5)	1.23E-2(4)	1.28E-2(3)	8.25E-3(6)	7.73E-3(7)
Avg Rank		3.42	**2.54**	9.35	9.35	3.42	4.67	6.04	5.79	5.38	5.04

Table 2: THE IGD PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 100,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 10 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set		GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	RVSS-AD
Linear Triangular	3	4.27E-2(7)	4.24E-2(6)	-(9.5)	-(9.5)	4.38E-2(8)	4.04E-2(3)	**3.70E-2(1)**	3.71E-2(2)	4.12E-2(4)	4.12E-2(5)
	5	1.06E-1(8)	1.01E-1(5)	-(9.5)	-(9.5)	9.86E-2(4)	9.25E-2(3)	**8.17E-2(1)**	8.20E-2(2)	1.04E-1(6)	1.04E-1(7)
	8	-(9)	1.85E-1(7)	-(9)	-(9)	1.77E-1(6)	1.57E-1(3)	1.33E-1(2)	**1.32E-1(1)**	1.72E-1(4)	1.74E-1(5)
	10	-(9)	1.88E-1(7)	-(9)	-(9)	1.76E-1(4)	1.57E-1(3)	1.36E-1(2)	**1.36E-1(1)**	1.77E-1(5)	1.83E-1(6)
Linear Invertedtriangular	3	4.53E-2(6)	4.37E-2(4)	-(9.5)	-(9.5)	4.39E-2(5)	4.03E-2(3)	**3.71E-2(1)**	3.72E-2(2)	7.07E-2(7)	7.10E-2(8)
	5	1.05E-1(6)	1.05E-1(5)	-(9.5)	-(9.5)	9.89E-2(4)	9.25E-2(3)	**8.16E-2(1)**	8.19E-2(2)	1.32E-1(7)	1.63E-1(8)
	8	1.67E-1(5)	1.60E-1(4)	-(9.5)	-(9.5)	1.76E-1(6)	1.57E-1(3)	1.33E-1(2)	**1.32E-1(1)**	1.99E-1(8)	1.91E-1(7)
	10	-(9)	1.63E-1(4)	-(9)	-(9)	1.74E-1(5)	1.57E-1(3)	1.36E-1(2)	**1.35E-1(1)**	1.87E-1(7)	1.81E-1(6)
Concave Triangular	3	7.45E-2(8)	6.38E-2(7)	-(9.5)	-(9.5)	5.53E-2(4)	5.36E-2(3)	**4.99E-2(1)**	5.00E-2(2)	5.78E-2(5.5)	5.78E-2(5.5)
	5	2.24E-1(8)	1.83E-1(5)	-(9.5)	-(9.5)	1.58E-1(4)	1.54E-1(3)	**1.40E-1(1)**	1.40E-1(2)	1.83E-1(6.5)	1.83E-1(6.5)
	8	4.19E-1(8)	3.88E-1(7)	-(9.5)	-(9.5)	3.30E-1(4)	3.13E-1(3)	2.78E-1(2)	**2.77E-1(1)**	3.78E-1(5.5)	3.78E-1(5.5)
	10	-(9)	4.25E-1(7)	-(9)	-(9)	3.64E-1(4)	3.47E-1(3)	3.14E-1(2)	**3.12E-1(1)**	4.18E-1(5.5)	4.18E-1(5.5)
Concave Invertedtriangular	3	3.68E-2(6)	3.50E-2(5)	-(9.5)	-(9.5)	2.83E-2(4)	2.69E-2(3)	**2.43E-2(1)**	2.43E-2(2)	6.86E-2(8)	6.64E-2(7)
	5	6.48E-2(6)	5.62E-2(5)	-(9.5)	-(9.5)	4.32E-2(4)	3.74E-2(3)	**3.20E-2(1)**	3.22E-2(2)	2.75E-1(8)	1.79E-1(7)
	8	9.76E-2(6)	8.50E-2(5)	-(9.5)	-(9.5)	6.43E-2(4)	4.69E-2(3)	**3.68E-2(1)**	3.69E-2(2)	3.20E-1(8)	2.46E-1(7)
	10	-(9)	7.22E-2(5)	-(9)	-(9)	5.35E-2(4)	3.86E-2(3)	**3.11E-2(1)**	3.11E-2(2)	5.19E-1(7)	2.20E-1(6)
Convex Triangular	3	2.78E-2(4)	2.94E-2(6)	-(9.5)	-(9.5)	2.85E-2(5)	2.69E-2(3)	**2.42E-2(1)**	2.43E-2(2)	4.46E-2(7)	4.46E-2(8)
	5	3.79E-2(5)	3.60E-2(3)	-(9.5)	-(9.5)	4.32E-2(6)	3.73E-2(4)	**3.20E-2(1)**	3.21E-2(2)	5.09E-2(7)	5.11E-2(8)
	8	-(9)	4.53E-2(3)	-(9)	-(9)	6.38E-2(7)	4.68E-2(4)	**3.69E-2(1)**	3.69E-2(2)	5.40E-2(6)	5.35E-2(5)
	10	-(9)	3.66E-2(3)	-(9)	-(9)	5.37E-2(7)	3.83E-2(4)	**3.10E-2(1)**	3.11E-2(2)	4.15E-2(5)	4.19E-2(6)
Convex Invertedtriangular	3	5.45E-2(5)	5.44E-2(4)	-(9.5)	-(9.5)	5.46E-2(6)	5.38E-2(3)	**4.99E-2(1)**	5.00E-2(2)	7.46E-2(8)	7.46E-2(7)
	5	1.54E-1(5)	1.49E-1(3)	-(9.5)	-(9.5)	1.59E-1(6)	1.54E-1(4)	**1.40E-1(1)**	1.40E-1(2)	2.06E-1(7)	2.06E-1(8)
	8	2.99E-1(4)	2.89E-1(3)	-(9.5)	-(9.5)	3.28E-1(6)	3.13E-1(5)	2.78E-1(2)	**2.77E-1(1)**	3.79E-1(7)	3.81E-1(8)
	10	3.31E-1(4)	3.26E-1(3)	-(9.5)	-(9.5)	3.68E-1(6)	3.47E-1(5)	3.15E-1(2)	**3.12E-1(1)**	4.03E-1(8)	4.00E-1(7)
Avg Rank		6.83	4.83	9.35	9.35	5.12	3.33	**1.33**	1.67	6.54	6.62

2

Table 3: THE IGD+ PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 100,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 10 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set		GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	RVSS-AD
Linear Triangular	3	2.96E-2(7)	2.94E-2(6)	-(9.5)	-(9.5)	3.04E-2(8)	2.81E-2(3)	**2.57E-2(1)**	2.57E-2(2)	2.92E-2(4)	2.92E-2(5)
	5	7.35E-2(6)	7.02E-2(5)	-(9.5)	-(9.5)	6.89E-2(4)	6.33E-2(3)	5.51E-2(2)	**5.50E-2(1)**	7.50E-2(7)	7.52E-2(8)
	8	-(9)	1.31E-1(7)	-(9)	-(9)	1.25E-1(6)	1.08E-1(3)	8.60E-2(2)	**8.56E-2(1)**	1.20E-1(4)	1.22E-1(5)
	10	-(9)	1.34E-1(7)	-(9)	-(9)	1.24E-1(4)	1.07E-1(3)	8.74E-2(2)	**8.66E-2(1)**	1.25E-1(5)	1.32E-1(6)
Linear Invertedtriangular	3	3.12E-2(6)	3.01E-2(5)	-(9.5)	-(9.5)	2.98E-2(4)	2.79E-2(3)	**2.61E-2(1)**	2.61E-2(2)	5.15E-2(7)	5.15E-2(8)
	5	6.98E-2(5)	7.00E-2(6)	-(9.5)	-(9.5)	6.61E-2(4)	6.27E-2(3)	5.84E-2(2)	**5.84E-2(1)**	8.49E-2(7)	1.03E-1(8)
	8	1.09E-1(5)	1.08E-1(4)	-(9.5)	-(9.5)	1.14E-1(6)	1.05E-1(3)	9.70E-2(2)	**9.68E-2(1)**	1.34E-1(8)	1.26E-1(7)
	10	-(9)	1.09E-1(4)	-(9)	-(9)	1.13E-1(5)	1.05E-1(3)	9.90E-2(2)	**9.88E-2(1)**	1.30E-1(7)	1.21E-1(6)
Concave Triangular	3	**2.26E-2(1)**	2.46E-2(2)	-(9.5)	-(9.5)	2.54E-2(3)	2.61E-2(4)	2.73E-2(7)	2.75E-2(8)	2.61E-2(5.5)	2.61E-2(5.5)
	5	**7.12E-2(1)**	7.42E-2(2)	-(9.5)	-(9.5)	7.79E-2(3)	8.27E-2(6)	8.76E-2(8)	8.76E-2(7)	7.86E-2(4.5)	7.86E-2(4.5)
	8	1.70E-1(2)	**1.70E-1(1)**	-(9.5)	-(9.5)	1.73E-1(5)	1.82E-1(6)	1.93E-1(8)	1.93E-1(7)	1.70E-1(3.5)	1.70E-1(3.5)
	10	-(9)	**1.96E-1(1)**	-(9)	-(9)	2.00E-1(4)	2.09E-1(5)	2.18E-1(6)	2.19E-1(7)	1.96E-1(2.5)	1.96E-1(2.5)
Concave Invertedtriangular	3	1.12E-2(4)	**9.92E-3(1)**	-(9.5)	-(9.5)	1.03E-2(2)	1.09E-2(3)	1.37E-2(6)	1.35E-2(5)	1.90E-2(8)	1.83E-2(7)
	5	1.60E-2(2)	**1.51E-2(1)**	-(9.5)	-(9.5)	1.60E-2(3)	1.75E-2(4)	2.21E-2(6)	2.17E-2(5)	6.93E-2(8)	5.99E-2(7)
	8	2.39E-2(4)	**2.17E-2(1)**	-(9.5)	-(9.5)	2.21E-2(2)	2.32E-2(3)	2.79E-2(6)	2.78E-2(5)	6.03E-2(8)	5.14E-2(7)
	10	-(9)	1.92E-2(2)	-(9)	-(9)	**1.89E-2(1)**	2.04E-2(3)	2.36E-2(4)	2.37E-2(5)	6.72E-2(7)	5.48E-2(6)
Convex Triangular	3	1.15E-2(4)	**1.10E-2(1)**	-(9.5)	-(9.5)	1.52E-2(6)	1.35E-2(5)	1.11E-2(2)	1.12E-2(3)	2.11E-2(7)	2.11E-2(8)
	5	1.88E-2(4)	1.57E-2(3)	-(9.5)	-(9.5)	2.74E-2(6)	2.11E-2(5)	**1.37E-2(1)**	1.39E-2(2)	3.04E-2(7)	3.12E-2(8)
	8	-(9)	2.26E-2(5)	-(9)	-(9)	2.87E-2(6)	3.08E-2(7)	1.50E-2(2)	**1.49E-2(1)**	1.68E-2(3)	1.70E-2(4)
	10	-(9)	1.93E-2(5)	-(9)	-(9)	2.35E-2(6)	2.40E-2(7)	**1.27E-2(1)**	1.27E-2(2)	1.37E-2(3)	1.49E-2(4)
Convex Invertedtriangular	3	**2.59E-2(1)**	2.68E-2(4)	-(9.5)	-(9.5)	2.95E-2(6)	2.90E-2(5)	2.64E-2(2)	2.65E-2(3)	4.30E-2(8)	4.30E-2(7)
	5	**7.30E-2(1)**	7.88E-2(2)	-(9.5)	-(9.5)	9.65E-2(6)	9.10E-2(5)	8.04E-2(3)	8.05E-2(4)	1.46E-1(7)	1.47E-1(8)
	8	**1.49E-1(1)**	1.56E-1(2)	-(9.5)	-(9.5)	2.22E-1(6)	2.05E-1(5)	1.70E-1(4)	1.67E-1(3)	2.27E-1(7)	2.37E-1(8)
	10	**1.69E-1(1)**	1.74E-1(2)	-(9.5)	-(9.5)	2.51E-1(8)	2.28E-1(5)	1.91E-1(4)	1.88E-1(3)	2.29E-1(6)	2.41E-1(7)
Avg Rank		4.92	**3.29**	9.35	9.35	4.75	4.25	3.50	3.33	6.00	6.25

3

Table 4: THE UNIFORMITY LEVEL PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 100,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 10 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set		GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	RVSS-AD
Linear Triangular	3	4.29E-2(8)	5.04E-2(7)	-(9.5)	-(9.5)	8.92E-2(3)	8.10E-2(5)	8.15E-2(4)	7.84E-2(6)	**1.11E-1(1)**	1.10E-1(2)
	5	1.04E-1(7)	1.19E-1(5)	-(9.5)	-(9.5)	1.62E-1(3)	1.35E-1(4)	1.02E-1(8)	1.08E-1(6)	**1.62E-1(1.5)**	**1.62E-1(1.5)**
	8	-(9)	1.43E-1(5)	-(9)	-(9)	**2.58E-1(1)**	2.07E-1(2)	1.07E-1(7)	1.18E-1(6)	1.51E-1(3.5)	1.51E-1(3.5)
	10	-(9)	1.43E-1(5)	-(9)	-(9)	**2.46E-1(1)**	1.92E-1(2)	8.91E-2(7)	1.02E-1(6)	1.51E-1(4)	1.58E-1(3)
Linear Invertedtriangular	3	4.98E-2(6)	5.76E-2(5)	-(9.5)	-(9.5)	**8.93E-2(1)**	8.09E-2(2)	8.00E-2(3)	7.91E-2(4)	0(7.5)	0(7.5)
	5	9.49E-2(6)	1.02E-1(4)	-(9.5)	-(9.5)	**1.64E-1(1)**	1.35E-1(2)	1.00E-1(5)	1.05E-1(3)	0(7.5)	0(7.5)
	8	1.63E-1(4)	1.85E-1(3)	-(9.5)	-(9.5)	**2.60E-1(1)**	2.07E-1(2)	1.14E-1(6)	1.16E-1(5)	0(7.5)	0(7.5)
	10	-(9)	1.50E-1(3)	-(9)	-(9)	**2.46E-1(1)**	1.93E-1(2)	8.97E-2(5)	1.02E-1(4)	0(6.5)	0(6.5)
Concave Triangular	3	5.09E-2(8)	6.73E-2(7)	-(9.5)	-(9.5)	**1.14E-1(1)**	1.06E-1(3)	1.07E-1(2)	1.05E-1(4)	8.89E-2(5.5)	8.89E-2(5.5)
	5	6.76E-2(8)	1.30E-1(7)	-(9.5)	-(9.5)	**2.62E-1(1)**	2.23E-1(2)	1.78E-1(4)	1.83E-1(3)	1.58E-1(5.5)	1.58E-1(5.5)
	8	2.08E-1(8)	2.40E-1(4)	-(9.5)	-(9.5)	**4.81E-1(1)**	4.07E-1(2)	2.26E-1(5)	2.67E-1(3)	2.12E-1(6.5)	2.12E-1(6.5)
	10	-(9)	2.53E-1(4)	-(9)	-(9)	**4.98E-1(1)**	4.20E-1(2)	2.31E-1(5)	2.58E-1(3)	1.54E-1(6.5)	1.54E-1(6.5)
Concave Invertedtriangular	3	1.17E-2(6)	3.02E-2(5)	-(9.5)	-(9.5)	**5.61E-2(1)**	5.50E-2(2)	4.79E-2(4)	4.85E-2(3)	0(7.5)	0(7.5)
	5	2.38E-2(6)	2.83E-2(5)	-(9.5)	-(9.5)	**7.46E-2(1)**	5.68E-2(2)	4.36E-2(3)	4.26E-2(4)	0(7.5)	0(7.5)
	8	2.84E-2(6)	6.42E-2(3)	-(9.5)	-(9.5)	**1.05E-1(1)**	6.53E-2(2)	3.57E-2(5)	3.65E-2(4)	0(7.5)	0(7.5)
	10	-(9)	3.23E-2(3)	-(9)	-(9)	**8.18E-2(1)**	4.88E-2(2)	2.56E-2(5)	2.58E-2(4)	0(6.5)	0(6.5)
Convex Triangular	3	3.42E-2(7)	3.23E-2(8)	-(9.5)	-(9.5)	**5.42E-2(1)**	5.41E-2(2)	4.68E-2(4)	4.69E-2(3)	3.76E-2(5.5)	3.76E-2(5.5)
	5	3.25E-2(8)	3.78E-2(5)	-(9.5)	-(9.5)	**7.40E-2(1)**	5.65E-2(2)	4.28E-2(3)	4.19E-2(4)	3.63E-2(6.5)	3.63E-2(6.5)
	8	-(9)	4.18E-2(4)	-(9)	-(9)	**1.03E-1(1)**	6.50E-2(2)	3.62E-2(7)	3.75E-2(5)	3.69E-2(6)	4.71E-2(3)
	10	-(9)	3.05E-2(4)	-(9)	-(9)	**8.25E-2(1)**	4.87E-2(2)	2.47E-2(6)	2.46E-2(7)	2.50E-2(5)	3.30E-2(3)
Convex Invertedtriangular	3	7.05E-2(6)	7.50E-2(5)	-(9.5)	-(9.5)	**1.10E-1(1)**	1.07E-1(4)	1.10E-1(2)	1.08E-1(3)	0(7.5)	0(7.5)
	5	1.40E-1(5)	1.32E-1(6)	-(9.5)	-(9.5)	**2.64E-1(1)**	2.23E-1(2)	1.75E-1(4)	1.80E-1(3)	0(8)	2.29E-2(7)
	8	1.49E-1(6)	2.20E-1(5)	-(9.5)	-(9.5)	**4.75E-1(1)**	4.06E-1(2)	2.31E-1(4)	2.60E-1(3)	0(7.5)	0(7.5)
	10	1.77E-1(6)	2.19E-1(5)	-(9.5)	-(9.5)	**5.00E-1(1)**	4.20E-1(2)	2.28E-1(4)	2.59E-1(3)	0(7.5)	0(7.5)
Avg Rank		7.25	4.88	9.35	9.35	**1.17**	2.33	4.67	4.12	6.06	5.81

Table 5: THE RUNTIME PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDI-DATESOLUTION SET IS 100,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 10 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set		GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	RVSS-AD
Linear Triangular	3	1.44E+2(7)	2.57E+1(5)	-(9.5)	-(9.5)	7.12E+0(4)	1.31E+0(3)	3.82E+1(6)	8.00E+2(8)	3.54E-1(2)	**2.03E-1(1)**
	5	4.65E+2(7)	8.93E+1(6)	-(9.5)	-(9.5)	4.48E+1(4)	1.65E+0(3)	8.31E+1(5)	8.29E+2(8)	1.42E+0(2)	**2.77E-1(1)**
	8	-(9)	5.97E+1(6)	-(9)	-(9)	3.06E+1(4)	1.41E+0(3)	3.95E+1(5)	6.06E+2(7)	5.74E-1(2)	**2.32E-1(1)**
	10	-(9)	8.88E+1(6)	-(9)	-(9)	5.26E+1(5)	1.92E+0(3)	3.51E+1(4)	5.18E+2(7)	5.23E-1(2)	**2.31E-1(1)**
Linear Invertedtriangular	3	1.11E+2(7)	2.50E+1(5)	-(9.5)	-(9.5)	5.58E+0(4)	1.30E+0(3)	4.81E+1(6)	7.96E+2(8)	4.29E-1(2)	**1.88E-1(1)**
	5	2.95E+2(7)	8.67E+1(6)	-(9.5)	-(9.5)	5.60E+1(4)	1.62E+0(3)	7.78E+1(5)	8.46E+2(8)	1.28E+0(2)	**6.30E-1(1)**
	8	6.99E+2(8)	5.76E+1(6)	-(9.5)	-(9.5)	3.11E+1(4)	1.34E+0(3)	3.79E+1(5)	5.78E+2(7)	5.75E-1(2)	**3.70E-1(1)**
	10	-(9)	1.02E+2(6)	-(9)	-(9)	7.20E+1(5)	1.89E+0(3)	3.45E+1(4)	4.80E+2(7)	4.22E-1(2)	**1.77E-1(1)**
Concave Triangular	3	1.37E+2(7)	2.59E+1(5)	-(9.5)	-(9.5)	7.12E+0(4)	1.26E+0(3)	3.34E+1(6)	7.95E+2(8)	6.28E-1(2)	**1.34E-1(1)**
	5	3.29E+2(7)	1.03E+2(6)	-(9.5)	-(9.5)	6.03E+1(4)	1.94E+0(3)	6.86E+1(5)	8.30E+2(8)	8.42E-1(2)	**3.48E-1(1)**
	8	1.71E+3(8)	5.31E+1(5)	-(9.5)	-(9.5)	3.46E+1(4)	1.34E+0(3)	6.07E+1(6)	6.54E+2(7)	6.81E-1(2)	**4.99E-1(1)**
	10	-(9)	7.82E+1(5)	-(9)	-(9)	8.08E+1(6)	1.79E+0(3)	7.13E+1(4)	5.63E+2(7)	5.65E-1(2)	**2.14E-1(1)**
Concave Invertedtriangular	3	8.38E+1(7)	2.54E+1(5)	-(9.5)	-(9.5)	5.59E+0(4)	1.31E+0(3)	4.06E+1(6)	7.81E+2(8)	5.92E-1(2)	**1.40E-1(1)**
	5	1.78E+2(7)	1.15E+2(6)	-(9.5)	-(9.5)	6.06E+1(5)	1.69E+0(3)	5.99E+1(4)	8.33E+2(8)	6.80E-1(2)	**4.42E-1(1)**
	8	2.39E+2(7)	6.39E+1(6)	-(9.5)	-(9.5)	2.91E+1(4)	1.41E+0(3)	4.79E+1(5)	6.49E+2(8)	7.02E-1(2)	**4.75E-1(1)**
	10	-(9)	1.00E+2(6)	-(9)	-(9)	8.02E+1(5)	1.84E+0(3)	4.40E+1(4)	5.39E+2(7)	4.02E-1(2)	**3.23E-1(1)**
Convex Triangular	3	1.54E+2(7)	2.55E+1(5)	-(9.5)	-(9.5)	7.03E+0(4)	1.27E+0(3)	4.07E+1(6)	8.01E+2(8)	3.40E-1(2)	**1.86E-1(1)**
	5	5.67E+2(7)	9.16E+1(6)	-(9.5)	-(9.5)	4.16E+1(4)	1.95E+0(2)	7.10E+1(5)	8.21E+2(8)	2.11E+0(3)	**7.23E-1(1)**
	8	-(9)	5.09E+1(6)	-(9)	-(9)	2.63E+1(4)	1.41E+0(3)	4.96E+1(5)	6.29E+2(7)	1.26E+0(2)	**3.09E-1(1)**
	10	-(9)	8.27E+1(6)	-(9)	-(9)	8.17E+1(5)	1.79E+0(3)	4.13E+1(4)	5.34E+2(7)	8.11E-1(2)	**1.31E-1(1)**
Convex Invertedtriangular	3	1.05E+2(7)	2.49E+1(5)	-(9.5)	-(9.5)	5.58E+0(4)	1.28E+0(3)	3.77E+1(6)	7.92E+2(8)	5.56E-1(2)	**1.07E-1(1)**
	5	2.55E+2(7)	9.41E+1(6)	-(9.5)	-(9.5)	5.47E+1(4)	2.10E+0(3)	7.27E+1(5)	8.12E+2(8)	1.08E+0(2)	**4.94E-1(1)**
	8	1.73E+2(7)	5.55E+1(5)	-(9.5)	-(9.5)	2.85E+1(4)	1.39E+0(3)	6.87E+1(6)	6.54E+2(8)	5.80E-1(2)	**4.80E-1(1)**
	10	8.04E+2(8)	8.69E+1(6)	-(9.5)	-(9.5)	8.41E+1(5)	1.80E+0(3)	5.90E+1(4)	5.77E+2(7)	4.28E-1(2)	**3.42E-1(1)**
Avg Rank		7.71	5.62	9.35	9.35	4.33	2.96	5.04	7.58	2.04	**1.00**

Table 6: A SUMMARY OF THE RANK OF THE 10 SUBSET SELECTION METHODS WITH RESPECT TO DIFFERENT PERFORMANCE METRICS.

Performance metric	GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	RVSS-AD
hypervolume	3.42	**2.54**	9.35	9.35	3.42	4.67	6.04	5.79	5.38	5.04
IGD	6.83	4.83	9.35	9.35	5.12	3.33	**1.33**	1.67	6.54	6.62
IGD+	4.92	**3.29**	9.35	9.35	4.75	4.25	3.50	3.33	6.00	6.25
uniformity level	7.25	4.88	9.35	9.35	**1.17**	2.33	4.67	4.12	6.06	5.81
runtime	7.71	5.62	9.35	9.35	4.33	2.96	5.04	7.58	2.04	**1.00**